

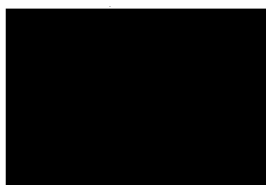
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19 September 1952

REPORT OF THE WORKING GROUP  
ON TECHNIQUES AND PROJECTS

Purpose: To review and evaluate the methods and techniques of economic analysis which have already been utilized in the preparation of ORR Office-wide projects, and to recommend Office-wide projects for inauguration prior to 1 January 1954 which utilize these and additional methods and techniques of economic analysis.

Membership



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TABLE OF CONTENTS

Introduction.....	1
I. ORR Achievements in Utilizing Methods and Techniques of Economic Analysis.....	2
A. Index-extrapolation Technique.....	2
1. Description and Application.....	2
2. Value of the Technique.....	2
3. Weaknesses of the Technique.....	3
B. Structural Inter-industry Technique.....	4
1. Description and Application.....	4
2. Value of the Technique.....	4
3. Weaknesses of the Technique.....	4
C. Technique for Measuring Costs of Trade-interdiction.....	4
1. Description and Application.....	4
2. Value of the Technique.....	4
3. Weaknesses of the Technique.....	6
D. Other Techniques and Methods of Economic Analysis Used in the Preparation of Office-wide Project.....	7
II. Recommendation for Office-wide Project to be Initiated Prior to 1 January 1954.....	8
Group 1. Office-wide Projects.....	8
Project A Chinese Communist Economic Development.....	8
Project B Structural Analysis.....	9
Project B/1 Structural Analysis of Steel.....	10
Project B/2 Structural Study of Manpower.....	10
Project B/3 Input Analysis of Investment.....	10
Project B/4 General Structural Analysis.....	10
Project C Trend and Status of Soviet Bloc Military Preparation.....	11
Group 2. Higher Priority Pilot Projects.....	11
Pilot Project A. Economic Vulnerabilities of the Soviet Bloc...	11
Pilot Project B. Structural Analysis of Energy.....	11
Pilot Project C. Depreciation and Replacement of Capital Goods in the USSR.....	12
Pilot Project D. Input-Output Study on the USSR.....	12
Group 3. Lower Priority Pilot Project.....	12
Pilot Project E. Mobilization Programming.....	12
Pilot Project F. Locational Analysis of the Soviet Bloc.....	13
Pilot Project G. Analysis of Inventories.....	13
Group 4. Inter-Divisional Projects.....	14

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III. Series of Occasional Papers.....	15
Annex One.....	16
Annex Two.....	16

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SECURITY INFORMATION

### Introduction

ORR's role is to provide intelligence on Soviet Bloc economic capabilities, vulnerabilities, and intentions. These topics encompass a large number of specific problems, any one of which could arise with little warning and require immediate attention. In order to be prepared for the most likely contingencies, ORR's research program must be flexible enough to apply to a variety of specific problems. We are in effect fashioning a set of building blocks which can be used to erect many different kinds of structures. Some of the blocks have greater general utility than others. These constitute the basic Office-wide research program and deserve most concerted attention at the outset. Study of inter-industrial relationships, study of production trends, and systematic organization of information belong in this category. The more specialized blocks, which tend to receive less attention in the early period of construction, should be formed and brought into their proper places as construction proceeds. Otherwise, we would end up with a series of finely built basements but no houses. Studies of Bloc military preparation, regional inter-relationships, mobilization programming, vulnerabilities, stockpiling, inventories, and capital depreciation tend to fit in this second category.

Such is the philosophy which has guided the Working Group in preparing its report. Section I reviews the research accomplishments of the past year. It is schematized according to techniques of economic analysis utilized in preparing Office-wide research. Section II presents the Group's recommendations for Office-wide projects to be inaugurated during the year. Some are to be full-blown studies from the start, and others are not to be undertaken until pilot projects, charting their content and objectives, have explored each topic for problems of concept, methodology and source materials. The pilot project is a new device to ORR, one which we hope will render valuable service in shaping Office-wide projects, not only for this year but future years as well. And finally, Section III proposes that a series of occasional papers be inaugurated to stimulate Office personnel at all levels into putting on paper their original thoughts and their "side-line" research, in order that ORR research be sharpened and that it move into new, unsuspected fields.

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## I. ORR Achievements in Utilizing Methods and Techniques of Economic Analysis

During the past year, the character and scope of ORR Office-wide research have been expanded to encompass more fully a few techniques of economic analysis which hitherto had been only sparsely applied in the intelligence effort on the Soviet Bloc. The success of these techniques has varied. At least one combination of them can be singled out as having organized and advanced considerably our knowledge of the Bloc economy. Other combinations have supplied mechanisms for solving problems but have rendered less satisfactory solutions. In still other instances, scarcity of data and faulty inter-agency cooperation have nearly halted progress.

### A. Index-extrapolation Technique

#### 1. Description and Application.

Apparently the most productive results achieved thus far are those of compiling, indexing, and extrapolating production data in the ORR contribution to NIE-65. The ORR objective in this study is to establish the limits on the economic capabilities of the Bloc for war in 1957. Output data for most major industries in the USSR covering the years 1928 through 1951 have been collected and systematized. About 87 percent of the economy (including data to be supplied by the military intelligence agencies on production of military end-items) will be covered in one fashion or another. The principal omitted sectors will be certain services such as health, education, and retail trade. While there are available sufficient statistics to estimate the volume of output of most commodities which comprise the 87 percent segment, it will be necessary in a handful of industries to impute total output from a few commodities whose production increments are assumed to be typical of the over-all increments in their respective industries.

Before 1 November, these data will be plotted in graphs similar to those in DM-366, A Preliminary Evaluation of the Fifth Five-Year Plan. By such a plotting mechanism the eye can readily grasp the trend of production of a commodity or in an industry. Moreover, the data will be combined to create indexes of production—for example, an index of non-ferrous metals production, an index of power output, and an index of capital goods output. These indexes will also be plotted for visual presentation.

By a mechanical process of extrapolating output curves beyond 1951, one picture of the Soviet economy in future years can be obtained. But simple mechanical extrapolation based on a constant growth rate is inadequate; the better method is Office-wide consultation to obtain a consensus on the future's most likely production in each commodity and industry. In most cases this will consist of adjusting the simple extrapolation according to independent criteria, such as plan figures or known efforts to emphasize certain industries.

#### 2. Value of the Technique.

As of today, the processes of charting, indexing, and extrapolating have not been completed. Thus we may be premature in passing judgment on the value

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of this process. Yet we have completed enough pieces of the job to see that it will provide a basis for several kinds of intelligence analyses. It should shed light on the future of industry and agriculture in the Bloc; will present a basis for comparing the Bloc's economic potential with the US and with the West; and may suggest strengths and weaknesses of the Bloc economy. These are valuable elements in assessing the Bloc's power position, power potential, and power intentions. Moreover, this combination of techniques has the peculiar quality that, when applied to the Bloc economy, it is more reliable than when applied to the Western economies, to the extent that the Bloc is more free from cyclical fluctuations.

### 3. Weaknesses of the Technique.

The weaknesses of this technique are centered in the extrapolation process. One difficulty is that, while extrapolations may be satisfactory on the whole, certain ones may be too high and others too low. An additional technique of analysis is necessary to achieve mutual consistency among the various projections. Another difficulty, which is present in any estimating for the future, is inability to account for unforeseen factors, such as changes in Kremlin planning. We (the Working Group) have diverse opinions as to the seriousness of a third element of weakness in extrapolating. Part of the Working Group believes that the aggregate rate of growth of the economy which is forecast by this technique cannot be regarded as conclusive of growth capabilities. According to this thesis, the key question—whether the projected rates of development can be realized simultaneously—remains unanswered. The rest of the Group does not believe this is a question of over-riding concern.

In addition to technique weaknesses, the data present a serious problem. When cast into the charts of IM-366, the statistics give an appearance of firmness which is misleading, possibly dangerous. If a sharp insight from some outside source (that is, outside our present bounds of knowledge) were obtained, the web of production estimates might easily collapse, revealing a cavern of ignorance. At present, we are unable to size up this ignorance; we take cognizance only that it may be great, that as time recedes further away from the firm figure of the late thirties and 1940, ORR figures may concurrently edge further away from reality.

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## B. Structural Inter-Industry Technique 1/

### 1. Description and Application.

The first of the newer techniques to be applied in ORR on a large scale was a structural analysis of major industries—an analysis to establish their inputs, the distribution of their outputs, and from these to derive inter-industrial relationships. It was undertaken at the request of JCS. ORR was to carry through three separate studies on Bloc economic capabilities based on the structural technique. The first assumed cold war condition from 1 July 1952 to 31 July 1953 (ORR # 110-51); the second assumed a hot war in the same period; and the third assumed a hot war from 1 July 1954 to 31 June 1955. In each of these studies the economy of the USSR was to be dissected according to inter-industrial relationships, and the pieces were to be placed systematically in a huge table with inputs in the rows and outputs in the columns. This arrangement permits comparison of the various estimates. The purpose is two-fold: to provide a check on the validity of economic estimates by seeing if they "make sense" with respect to the rest of the economy; and to determine whether in fact industrial production is great enough to sustain military production and consumption estimates. Part III of WGC-D-6 (EIC), Economic Capabilities of the Soviet Bloc to Support a General War, details this analytical approach to economic capabilities.

### 2. Value of the Technique.

While it is difficult to judge the technique per se, because none of the three studies has been completed, it appears to be one which can become of great importance in achieving ORR objectives. The structural technique helps to bridge the gap between economic activity and military activity. It is the primary means we have for systematizing production data so that estimates can be formed on the capabilities of the Bloc to produce military end-items. Similarly, though perhaps with even less precision, it assists in determining capabilities for military operations. In addition to its value in estimating over-all capabilities, the technique is useful for estimating capabilities in one or a few commodities. Another important use is for checking intelligence information by showing consistency among the data submitted from diverse sources.

### 3. Weaknesses of the Technique.

A thorough discussion of the weaknesses of input-output technique as ORR has used it would require a more elaborate theoretical discussion than is appropriate here. Suffice it to say that weaknesses of technique and of data are intimately interwoven with each other as well as with objectives of particular input-output studies. The chief technical weaknesses are:

(a) The technique assumes constant methods and scale of production (i.e., constant coefficients of production). Taking

1/ The term "structural inter-industry" is used here instead of "input-output", because to date ORR research along these lines has used only a small part of the total technique established by Leontief and known as input-output analysis. Pilot Project D (see below) is designated as an input-output study, because it will more nearly encompass the entire concept.

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account of changes in these coefficients greatly complicates the technique and may often be impossible. There is wide disagreement as to the quantitative importance of ignoring such changes, but errors are minimized if comparisons are made only for short periods.

(b) It is impossible to get 100 percent coverage of the economy by using physical data. Value data, which might be used to fill in the gaps, are difficult to convert into physical units. Therefore, complete coverage can probably not be satisfactorily achieved.

Limitations of data are, if anything, greater than weaknesses of technique. A great amount of quantitative information is required and simply does not exist for the Soviet economy. The problems of the data cannot be completely solved; ORR must gradually firm up its estimates and work with the most reliable methods of obtaining technical information, and must orient its use of the technique to conform to the data available.

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C. Technique for Measuring Costs of Trade-interdiction

1. Description and Application.

No very satisfactory answer has yet been found to the question of who would lose more if East-West trade were severed. Difficulties are in part traceable to the very nature of the problem and in part to improper formulation of the problem. In its recent study (NIE-59), ORR has defined the problem as the measurement of economic gains, or conversely the economic loss resulting from trade severance. That is, an attempt was made to measure the economic cost that would be imposed on the Bloc (West) if it in fact produced all the items now gotten through trade. This cost is the bundle of resources needed to replace imports minus the bundle released from production of exports, aggregated together in "monetary" terms. It will vary over the period following trade severance, being highest immediately after severance and declining gradually thereafter. The cost will be non-strategic to the extent that it can be shifted into the civilian sector without affecting output of military end-items or military-supporting items.

2. Value of the Technique.

As to the value of this technique, the Working Group can agree on only one thing--that ORR's general approach to the problem is useful. When ORR was requested to make a study of the importance of East-West trade to the Soviet Bloc and to the West, a difficult conceptual question was posed: in a cold war setting, how is the importance of trade between "enemies" to be determined? The most frequently accepted definition of importance was in terms of the strategic worth of a commodity. Any military end-item, and other items, such as petroleum and transport equipment, were regarded as having great value. Civilian-type goods were regarded as having less or little war value. Between the extremes fell those commodities whose importance depended upon their closeness to military usage. A scale of values was created, in which items whose ties to the armed forces could be clearly discerned were given high strategic ratings.

ORR challenged this concept, offering both an alternative definition of strategic value and a method for measuring changes in strategic welfare. The method has been described briefly in the preceeding section (see also An Analytical Framework for Study of Economic Warfare as Applied to East-West Trade Problems, part of the ORR contribution to NIE-59).

3. Weaknesses of the Technique.

While the Working Group is agreed that ORR's general approach to the problem posed is useful, there is no consensus among Group members on the manner in which the study was carried out. In the opinion of D/A, where the data were compiled and the study written, its major weakness is the relatively shaky estimate of short-run costs. The shakiness flows largely from inadequate information on the specific notion of trade and of productive conditions within the Bloc. While estimates of aggregate long-run costs are reasonably reliable, those for specific industries are subject to extremely wide ranges of view.

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The other divisions have criticisms which go far beyond this. They are so extensive that they cannot be condensed into this report. The Working Group therefore refers the reader to the D/I, D/M, and D/E comments on NIE-59, which were submitted to D/A early this summer. Two members of the Group also wish to boil down their primary complaint and record it here: that less time-consuming methods of estimating the costs would have achieved results equally reliable.

D. Other Techniques and Methods of Economic Analysis Used in the Preparation of Office-wide Projects

Aside from the three techniques of economic analysis described previously, no other techniques were introduced to ORR for the first time on an Office-wide basis during the past year. The preparation of the ORR contribution to NIE-33 consisted of a massive compilation of data and other information on the Eastern European Satellites, arranged in a logical sequence. It contained little genuine analysis. The ORR contribution to NIE-40 was simply a straightforward address to the question posed in the terms of reference: what would be the potential economic gains of USSR resulting from acquisition of Continental Western Europe in mid-1952? It consisted of a series of area studies in which economic resources were estimated, totaled, and matched together, and estimates formed on the ability of the USSR to utilize Western European resources.

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## II. Recommendations for Office-wide Projects to be Initiated Prior to 1 January 1954.

The series of projects which we recommend in this report comprises a program for Office-wide research. But it is a flexible program, merely the one which looks best to us now. Further refinement is needed, both now and as the program (if it is adopted) proceeds. We have allowed for flexibility in several ways. No attempt was made to prognosticate the man-hours involved, the dates of inauguration, the deadlines for completion--thereby avoiding rigidity. Further flexibility is obtained by the device of the pilot project.

Most Office-wide projects should not be undertaken until standard definitions, frames of reference, and methods have been explored via the mechanism of a pilot project. The concept of the pilot project is highly regarded by the Working Group, because it is felt that Office-wide projects should be based more on experience and less on intuitive judgments. The emphasis in pilot projects will be on critical evaluation of theory, methodology, and feasibility. They will probably also include some empirical analysis. A pilot project will be a small study designed to push ORR research forward into new fields. It will be conducted by one or a few individuals from any division. It can be done in a week or in a year, depending on the size and timeliness of the subject, the availability of the materials, and the necessity for completion so that the ORR workload of Office-wide projects will be constant. The ultimate object of each pilot project will be to build the framework for a possible subsequent Office-wide project. If in the course of preparing the pilot study a topic is found not to be worthwhile, or if it is found not feasible, then a recommendation will be forwarded to the effect that an Office-wide project on that topic should not be undertaken. Thus further flexibility in Office-wide programming should be obtained, as well as higher achievement in results.

The series of projects which we recommend follows. The series is divided into three groups, according to whether they should be inaugurated with or without a preceding pilot study, and whether the pilot study is of higher or lower priority. No order of priority within each group is intended.

### Group 1. Office-wide Projects

#### Project A. Communist Chinese Economic Developments

Top priority, at least until the first of the year, should be given to systematizing ORR knowledge of Communist China. This is the greatest unexplored field of Bloc economic capabilities. When this is done, and not until then, will it be possible to recommend techniques of economic analysis to be applied in interpreting the data so that the economic capabilities series can include studies on Communist China. We concur with the ORR Working Group on Communist China that a fact-finding project is the immediate need. Their recommendations for this project are incorporated in the following paragraphs.

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1. The purpose of the project is threefold: First, it is to assemble all of the immediately available and pertinent information on the economy of Communist China since 1949. Second, it is to arrive at a clear understanding of the economic plant which the Communists took over in 1949, and of the course of economic development since that time. And third, it is to develop an annotated bibliography of existing sources of information on the Chinese economy.

2. The approach is initially somewhat encyclopaedic in an attempt to locate and present all the pertinent intelligence on the area. On the basis of this fact-finding study priority requirement for collection, translation, and further analyses can be rationally determined.

3. Methodologically the project is in its first phase more descriptive than analytical. The paper completed by 15 January 1953 will outline what we know about developments in each of the sectors of the Chinese Communist economy. Important, readily available, and unevaluated information not covered in other studies will appear in the report. Previously prepared reports will be merely referenced. Important sources of information not covered in the report will be carefully identified for further exploitation.

4. While the initial phase of the project has been termed "fact-finding," analysts will bear in mind the major intelligence problems for which we are called upon to offer intelligence guidance. The problems are suggested by the following questions:

- (a) What are the present level and rate of growth of industry?
- (b) What are the resources available, both on an immediate and deferred basis, to support the Communist Chinese military, industrial, and consumption programs?
- (c) What are the overall economic strains, fiscal and otherwise, created by current programs?
- (d) What are the economic strength and weaknesses of the major sector of the economy, i.e., transportation, agriculture, power and fuel resources, etc.?
- (e) What are the nature and extent of Chinese dependence on external sources of supply?
- (f) What are the logistic requirements of Chinese armies in military operations, the location of major arsenals and factories and the capacity of the transportation network to deliver supplies to present and potential theaters of operation.

- 9 -

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### Project B. Structural Analyses

A major emphasis in Office-wide research projects during the coming year should consist in enlarging and improving inter-industry structural analysis. While Project 110-51 is clearly a failure in itself, the approach is one which will assist in organizing large masses of data systematically and can give answers to the capabilities problem. The program of structural analysis should consist of four separate Office-wide projects. While they are closely related to one another and will ultimately be fused into one project, at present they ought to be handled separately. Tied in with a general structural study will be three special Office-wide studies designed not only to supplement the general study but also to yield reports of importance in themselves. Two of these special studies--steel and manpower--are to determine in detail the use patterns of specific items by estimating their consumption in every sector of the economy. The other is to analyze investment in great detail. In addition to these three, a special study on energy would be desirable if it can be done. Hence a pilot project on energy has been recommended.

#### Project B/1. Structural Analysis of Steel

An Office-wide project on steel products consumption would require each branch in ORR to prepare steel products (bars, sheets, etc.,) input coefficients covering all items falling within the branch's responsibility for which current production estimates are available. This would give approximately the same coverage as NIE-65. These estimates, which would be derived independently of the use pattern constructed by M/FM branch, would constitute a separate steel report. The value of the project would be two-fold. First, it would contribute materially to filling in gaps in the structural table. Second, it would permit a quantitative determination of the limitation imposed by steel supply on Soviet military capabilities and economic expansion.

#### Project B/2. Structural Study of Manpower

An input study on manpower, detailing labor input requirements by industry and by skill and occupational speciality, should also be undertaken. It would also have approximately the coverage mentioned under Project B/1. The manpower input section of the study would supplement the work of S/L, become a part of their 1953 reports, and contribute to the general structure analysis.

- 10 -

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An Office-wide project to study investment requirements is recommended. Since this involves breaking new ground in many cases, the industry coverage should be a subject for further investigation. The project will require each branch to submit for each of the industries to be covered the following: (a) an inventory of the major equipment and machinery items by type and of construction facilities, as of the end of 1952; (b) the flow of such major capital items required for replacement in the year 1950 through 1954; and (c) the annual flow of such major capital items which would be required to expand production capacity by the increments required in the Fifth Five-Year Plan or by ten percent per year. The study is of importance in estimating capabilities and resource availability, in relating growth potential to the Five Year Plan, in determining the demand on supporting (machinery, equipment and construction) industries, and in estimating the costs, in real terms, of diverting resources from investment to military production.

Project B/4. General Structural Analysis

About the first of the year (at least a month should be allowed for tooling up), a new general Office-wide structural study should be laid on which would aim at bringing into the table the major commodities and services not covered in ORR #110-51. There would be no call for a general review of inputs and distribution patterns, except to the extent that improved data become available through branch studies and other projects. The additional commodities should give a coverage substantially that of VIE-65, or about 85 percent of the economy as a whole. The new study will extend ORR #110-51, but in order that it be more reliable and more conclusive than its predecessor, three important departures are recommended. The first is coverage of new industries and commodities. The second is concentration on production and input patterns to the exclusion of use patterns. While it would also be useful to have the last, it is more important that branches not scatter their effort in trying to estimate too many diverse things. Also, use patterns can be obtained from the input structure of industry, given adequate coverage. The third departure is the inclusion of inputs into military end-items. When hot war requirements are furnished by the military intelligence agencies to ORR, D/A will, without further formal contributions from other divisions, estimate hot war economic capabilities.

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Project C. Trends and Status of Soviet Bloc  
Military Preparation

We recommend that a project be undertaken which would require branches to submit estimates on (a) strategic stockpiles, including munitions, and (b) production of military end-items and supplies. D/A would use all the material, along with that of its divisional studies dealing with national economic accounts and area analyses, to draw together the complete project. It is contemplated that the information on strategic stockpiling and the production of military end items will be submitted as the fruit of basic branch or division projects written during 1952 or to be written during 1953. However, it is recognized that demands on ORR by ONE and possibly others may require both an acceleration of the submission of information and broader coverage of the commodities in the ORR Standard Classification than is now provided by branch and division studies.

Group 2. Higher Priority Pilot Projects

Pilot Project A. Economic Vulnerabilities of the Soviet Bloc

Vulnerability of the Soviet Bloc is one of the more advanced specialized subjects with which ORR should be concerned in 1953. A pilot project to explore the concept of economic vulnerability, to establish standard definitions, to explore methods and data availability and finally to test this theoretical work with an empirical study of East Germany is proposed. The concept of economic vulnerability is still vague; all we can say is that it includes such subjects as interdependence of areas and industries, regional and industrial vulnerabilities, "soft spots" in the Bloc economy, and the economic importance of defections. East Germany is the obvious area to use for the empirical part of the study because of the mass of reliable data available. By focusing on East Germany, bugs in the methods and concepts can be worked out and a framework for an Office-wide study developed.

Pilot Project B. Structural Analysis of Energy

A more reliable estimate of energy input requirements for Bloc industries than those of ORR #105-51 (never completed) should be prepared. The study of energy requirements is complex and the Working Group believes it should first be undertaken as a pilot project, then later, if feasible, laid on as an Office-wide project to supplement Projects B/1 through B/4 (above). Because of its complexity, coverage should be restricted to the major energy consuming industries. It is assumed that these would account for over half of total energy output. The remainder should be divided among other

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Soviet industries by analogy with US practice. The frame of reference should be marked out so that, among other problems, a recommendation can be made as to whether the project should be confined to electric power or should take into account a broader study of fuels and their utilization both for power and other purposes. For the major consuming industries the method might consist of two steps: first, making engineering or direct estimates of the total energy, expressed in a general unit, e.g., BTU, required for power, heat processing, space heating and light; and second, estimating how much of each energy source (internal and external) whether electric power, coal, petroleum or some other, is used by the specified industries. The purpose of the study is to provide an approximate energy balance calculation, to improve the use pattern of energy in the structural table, and to develop a framework for a possible Office-wide project.

Pilot Project C. Depreciation and Replacement of Capital Goods in the USSR

At the present time we have very little knowledge, either in real or monetary terms, of the depreciation and replacement policies and practices in the USSR. One result is a lack of information on the present composition and age distribution of the stock of capital goods, which makes it difficult to calculate present Soviet investment requirements. Also, we are not able to develop satisfactory annual capital input requirements. We recommend a pilot project to investigate these problems and to supplement and assist in the preparation of Office-wide Project B/3, Structural Analysis of Investment.

Pilot Project D. Input-Output Study on the USSR.

ORR has yet to undertake a full-scale input-output analysis on the USSR. An input-output analysis of the USSR would be subject to many limitations both methodologically and data wise. An exploration of the possibilities of the technique is certainly desirable in the next few months. The general theory underlying this form of analysis is well known; its application to other than the US areas is largely untouched. The particular problem of the relationship of value to physical units where valuation is frequently arbitrary has not been examined at all. It is suggested that one or two individuals be delegated to investigate thoroughly the possibilities of the technique as it would be applied to the USSR. After solving some problems of method, an examination of the 1947 US flow tables (transactions, coefficient, and inverse) might indicate ways of manipulating US data such that the method with all its theoretical vigor, will be applicable to the USSR. A significant contribution

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might be made to ORR's structural analysis and the way pointed to more rigorous theoretical background for Office-wide research.

### Group 3. Lower Priority Pilot Project

#### Pilot Project E. Mobilization Programming

At some point in the not very distant future ORR will be asked a series of uncomfortable questions revolving about the timing of full mobilization in the Soviet Bloc. These questions may well run: How long will it take the Bloc to mobilize; what quantities of what military end items can be turned out and what is the time phasing of this output; how quickly can stockpiles be channelled into armament plants and be turned into military end items; how soon can allocation of materials be shifted to military production and with what consequences; what effect will military operations during the mobilization period have on their production efforts? These are only samples of the problems ORR must be prepared to answer. ORR is unprepared to answer these questions.

Mobilization programming is one of the most complicated problems the intelligence community will encounter. Substantial brain-breaking conceptual work must be done by all intelligence agencies, especially by ORR. It is suggested that during the next year ORR, in co-operation with the EIC, tackle the problems of mobilization programming on a pilot study basis.

#### Pilot Project F. Locational Analysis of the Soviet Bloc

The location of industry and its relation to the transportation network, natural resources, and markets in the USSR and Satellites are frequently referred to in intelligence reports. References are usually limited to superficial comments on dispersion of industry, relative backwardness of transportation, regional self-sufficiency programs, and the stupidity of planners in laying out plants, groups of plants, and agglomerations (cross-hauls in petroleum products, for instance). No solid work has been done on regional analysis and location of industry, as related to other important economic variables. We do not know how to conduct a meaningful study, despite the fact that there are analysts competent in locational analysis in ORR, ONE, and elsewhere in the intelligence community. A thorough investigation is needed of fruitful approaches to the study of location of industry, not only to gain insights into resource allocation and planning in the Soviet Bloc but also to improve analysis of inter-industrial structure. Such study is also pertinent to analysis of economic vulnerabilities. In the course of the pilot study, the

- 14 -

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possibilities of utilizing external research would be thoroughly explored.

#### Pilot Project G. Analysis of Inventories

No direct attempt at analysis of inventories has been made by ORR. At least two aspects of inventories may be important. First, the availability of normal working inventories as a cushion against disruption of production or distribution has strategic significance. The level of working inventories influences the general vulnerability of an economy. An inventory level sufficient to support production for some considerable time would tend to reduce the vulnerability of an industry to interdiction of its supplies. Second, changes in inventories are also a major component of investment. Hence, the full economic impact of increased output of any item or bill of goods cannot be ascertained without taking inventories into account. There are many problems of inventory analysis which have not been solved even on a theoretical basis. For the Bloc there are also important data limitations. It is recommended that a preliminary review be made of the possible benefits to be derived from a study, of inventories, of data limitations, and of the conceptual and methodological problems involved.

#### Group H. Inter-Divisional Projects

In addition to these, there are a number of other projects cutting across divisional lines which the Working Group believes should be undertaken this year. These include input studies on tanks, aircraft, and electronics; ruble-dollar studies; feasibility and implications of the Fifth Five-Year Plan; and analysis of the firmness and reliability of production estimates and of Soviet published statistics. They should be undertaken as branch or division projects, with inter-divisional cooperation.

Since these studies are projects which will be conducted primarily by one branch or one Division, and the contribution to them from other Divisions will be relatively small, they are not included in this report as Office-wide or as pilot projects. However, some of the time allocated to Office-wide projects should be set aside for preparing contributions to inter-divisional projects.

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### III. Series of Occasional Papers

The Working Group believes that ORR personnel at all levels should be encouraged to put on paper their original thoughts and their "side-line" research conceivably of value anywhere in CIA. If some mechanism were created, such as a series of Occasional Papers, ideas of all kinds which do not fit into established publication series could be refined, published, and discussed. The benefits would, we believe, be extensive. It would encourage original thought and research, as well as stimulate discussion and exchange of ideas, all of which in turn should influence all forms of ORR research.

Accordingly, the Group recommends that this series be launched at once, along with proper encouragement for all personnel to participate. Following are several papers already completed which could become a part of the Series:

- (a) The methodology appendix, common to 45-51, 46-51, and 47-51, dealing with electrical machinery, electron tubes, and electronic components.
- (b) Appendix A on methods of estimating unreported trade in MP-84, which deals with the quantitative importance of clandestine trade.
- (c) The analytical framework for the study of economic warfare as applied to East-West trade, a contribution to NIE-59.
- (d) "Rules versus intuitive judgment," a methodology paper written in I/A&W, unpublished, 25X1A9a
- (e) Notes on methodology, [redacted] October 1951. 25X1A9a
- (f) Memo [redacted] on economic capabilities, February 1952.
- (g) Memo [redacted] on East-West trade and input-output technique, October 1951, 25X1A9a
- (h) A/EC paper [redacted] on uses and limitations of Soviet products indices, 25X1A9a
- (i) A/EC paper [redacted] on the Soviet Price System. 25X1A9a
- (j) A/EC memo [redacted] on Soviet prices and indices.

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(k) The methodology chapter in 38-51 (PR-S) on input requirements in the aircraft industry.

(l) Correlation analysis in crop yield estimation, a part of 52-51.

- 17 -

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**Materials Division's Dissent  
to the Report of the Working Group  
on Techniques and Projects**

D/M proposes that project B/A be changed to an interdivisional study under D/A with formal support from other divisions. The scope of the project as described in the Working Group's report is much too broad. The additional commodities covered in NIE-65 number almost as many as the original number in JCS 110-51. For many of these the value of estimating inputs is not worth the work involved. A more workable arrangement would be for D/A in consultation with the other divisions concerned to prepare a list of commodities limited in number but still adding significantly to the coverage of the structural table. On this basis the project could well be handled as a D/A project with formal support of other divisions and need not be laid on as an office-wide project.

25X1A9a

**SUPPLEMENTAL NOTE**

The pilot study concept is very good, but in drawing up the procedure set forth in the report, one factor relating to human nature has been ignored. The people who are most likely to be assigned to investigate the need for a project, its feasibility and the techniques by which results can best be attained, are those who are its proponents. Quite without conscious bias, they are likely to become more and more convinced of the prime value of the study as they live with the idea, and more set in their convictions that the method of approach which they work out is the only true doctrine and that difficulties and imperfections are minor things that good will and cooperativeness can easily vanquish. This must be guarded against, and preferably without taking up the time of the executives in conferences to which they come after brief preparation, to meet the arguments of a proponent who may have spent months in building up a very plausible but basically unsound case.

The concept of a "Devil's Advocate" is here suggested. It might be advisable to require a person or group to go over the same field that the student of a pilot project does, after he is far advanced in his work. Such a person or group would be instructed to investigate why the project should not be done. If the project survives this test, the suggested technical procedures for its effectuation should then be given critical study, to point out weaknesses and alternative methods and to suggest revisions of scope if deemed

- 18 -

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desirable. Only after this would the project come up for formal executive attention.

It is not contemplated that the "Devil's Advocate" have veto power to prevent submission of a project, but that when a project is not passed by him, the evidence against it will be available to assist in Project Board evaluation.

- 19 -

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